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10/586,287	09/29/2006	Wei-Ping Chen	WPTHOM9.001APC	4155
20995 7590 12/22/2009 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614			EXAMINER LEE, RIP A	
			ART UNIT 1796	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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DETAILED ACTION

This office action follows a response filed on September 10, 2009. Claims 1-43 were canceled, and new claims 44-63 were added.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 44-63 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Instant claims have been amended to exclude pairings of phenyl/methyl, phenyl/*n*-butyl, phenyl/*t*-butyl, phenyl/3,5-*bis*trifluoromethylphenyl, phenyl/anthracenyl, and *n*-butyl/*t*-butyl for substituents R¹ and R².

The relevant section of the specification may be located at page 10 where R¹ and R² are defined as generically as (un)substituted (cyclo)alkyl, (un)substituted (cyclo)alkoxy, (un)substituted (cyclo)alkylamino, (un)substituted carbocyclic aryl, (un)substituted aryloxy, (un)substituted heteroaryl, (un)substituted heteroaryloxy, and (un)substituted carbocyclic arylamino. There is no clear disclosure that the inventive compounds necessarily exclude the particular pairings of substituent recited in instant claims. Working examples show that inventors had possession of compound in which R¹ and R² are phenyl/methyl, but there are no examples shown in which compounds contain phenyl/*n*-butyl, phenyl/*t*-butyl, phenyl/3,5-*bis*trifluoromethylphenyl, phenyl/anthracenyl, and *n*-butyl/*t*-butyl pairings. Note that where alternative elements are positively recited in the specification, they may be explicitly excluded in the claims. *In re Johnson*, 558 F.2d 1008, 1019, 194 USPQ 187, 196 (CCPA 1977).

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Based on these considerations, it is deemed that claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention, and therefore, claims are rejected for failing to comply with the written description requirement. Dependent claims 45-63 are subsumed under the rejection.

Claim Objections

3. Claim 44 is objected to because of the following informalities: In the second to last line of the claim, please rewrite “*bis*trifluoromethylphenyl” as “*bis*(trifluoromethyl)phenyl.” Appropriate correction is required.
4. Claim 45 is objected to because of the following informalities: Please replace “diastereomer” with “diastereomer.” Appropriate correction is required.
5. Claim 50 is objected to because of the following informalities: Please replace “claim 1” with “claim 44.” Appropriate correction is required.

Claim Rejections - 35 USC § 102 / 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
7. Claims 44-54 are rejected under 35 U.S.C. 102(b) as being anticipated by Spindler *et al.* (U.S. 5,466,844).

Spindler *et al.* teaches ferrocene diphosphine compounds of general formula (I). Notably, in substituent $PR_{10}R_{11}$, groups R_{10} and R_{11} are different and are C_1 - C_{12} alkyl, C_1 - C_{12} cycloalkyl, C_1 - C_4 alkyl- or C_1 - C_4 alkoxy-substituted C_5 - C_{12} cycloalkyl, phenyl, or phenyl which is substituted by 1 to 3 identical or different members selected from the group consisting of C_1 - C_{12} alkyl, C_1 - C_{12} alkoxy, $-SiR_4R_5R_6$, halogen, $-SO_3M$, $-CO_2M$, $-PO_3M_2$, $-NR_7R_8$ or $-[NR_7R_8R_9]X$, wherein said compounds are in the form of racemates, diastereomers, or a mixture

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of diastereomers (claim 1). In one particular embodiment, R₁₀ is phenyl, and R₁₁ is cyclohexyl, 2-/4-methylphenyl, 2-/4-methoxyphenyl, 4-(dimethylamino)phenyl, 3,5-dimethyl-4-(dimethylamino)phenyl, 3,5-dimethyl-4-methoxyphenyl, or 4-*t*-butylphenyl (claim 16). The carbon atom in substituent C*HR¹-PR₂R₃ is chiral. Inventive compounds are used as ligands for rhodium and iridium complexes which are suitable for use as homogeneous enantioselective catalysts for hydrogenation of prochiral compounds (abstract). Preparation of inventive compounds involves reaction of lithiated ferrocene precursor containing substituent CHR¹-PR₂R₃ (chiral directing group) with appropriate Cl-PR₁₀R₁₁; see examples.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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9. Claims 44-63 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 38-44 of copending Application No. 10/586,204. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to substantially the same process of preparing metallocene based chiral ligand. Notably, copending claims recite substantially the same steps of ortho-lithiation in presence of a chiral/achiral or directing group (designated X*), and introducing substituent PR^1R^2 by subsequent reaction with R^1 -substituted phosphine followed by alkylation with R^2 -bearing Grignard reagent or organolithium. Chiral and achiral directing groups of copending claim 39 are identical to those recited in instant claim 56.

Claims of the copending application do not recite structures of the metallocene. Relevant section of the specification of copending application appears on page 22 of the disclosure, *inter alia*. One of skill in the art finds that the metallocene based chiral ligand prepared by the inventive process have the same structure as that recited in instant claims. Thus, the claims of the copending application are drawn to an obvious variant of the invention of the instant claims. Applicant's attention is drawn to MPEP § 804 where it is disclosed that "the specification can always be used as a dictionary to learn the meaning of a term in a patent claim." *In re Boylan*, 392 F. 2d 1017, 157 USPQ 370 (CCPA 1986). Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent. *In re Vogel*, 422 F.2d 438, 164 USPQ 619,622 (CCPA 1970)

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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Response to Arguments

10. Rejection of claims under 35 U.S.C. 112, 2nd paragraph, set forth in paragraph 12 of the previous office action dated June 10, 2009, has been withdrawn in view of appropriate claim amendments.

The rejections of claims under 35 U.S.C. 102(b) as being anticipated by Butler *et al.* (*Organometallics* 1986, 5, 320-1328), Troitskaya *et al.* (*Russian Chemical Bulletin* 1999, 48(9), 1738-1743), and Gambs *et al.* (*Helvetica Chimica Acta* 2001, 84, 3105-3126), set forth in paragraphs 14-16 of the previous office action have been withdrawn in view of claim amendment. Subsequent rejections under 35 U.S.C. 103(a), set forth in paragraphs 19-23 have also been withdrawn.

The provisional, nonstatutory obviousness-type double patenting rejection of claims over claims of copending Application No. 10/586,204, as applied to newly amended claims therein, has been maintained.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rip A. Lee/
Examiner, Art Unit 1796

/Ling-Siu Choi/
Primary Examiner, Art Unit 1796

December 15, 2009